

CLAIMS

1. Front suspension arm (1) of a motor vehicle, containing three bores corresponding respectively to a coupling (3) of the arm (1) to a wheel support, to a front coupling (4) and a rear coupling (5) of a hinge formed between that arm (1) and the chassis of the vehicle, characterized in that it is formed by a single sheet metal part (2) and in that the bores corresponding to the hinge couplings (4, 5) have appreciably perpendicular axes.
2. Suspension arm according to Claim 1, characterized in that the centers of the front coupling (4) and rear coupling (5) of the hinge are situated in the same longitudinal plane.
3. Suspension arm according to Claim 1 or 2, characterized in that the center of the front coupling (4) of the hinge is situated in back of a transverse plane passing through the center of the coupling (3) of the arm (1) on the wheel support.
4. Suspension arm according to one of the foregoing claims, characterized in that the single part (2) is formed by a stamped sheet presenting a flat center part (6), a first side (8) connecting the coupling (3) of the arm (1) to the wheel support and the rear coupling (5) of the hinge, a second side (10) connecting the coupling (3) of the arm (1) to the wheel support and the front coupling (4) of the hinge and a third side (16) connecting the two couplings (4, 5) of the hinge.
5. Suspension arm according to Claim 4, characterized in that an appreciably vertical joining plane (43) connects the second side (10) to the periphery of the bore corresponding to the front coupling (4) of the hinge.

6. Suspension arm according to Claim 4 or 5, characterized in that an appreciably horizontal joining plane (44) connects the third side (16) to the periphery of the bore corresponding to the front coupling (4) of the hinge.

7. Suspension arm according to one of Claims 4 to 6, characterized in that the first side (8) is provided with a vertical wall (9).

8. Suspension arm according to one of Claims 4 to 7, characterized in that the second side (10) is provided with a raised edge (11), the height of which gradually varies.

9. Suspension arm according to Claim 8, characterized in that the raised edge (11) of the second side (10) bears a dropped edge (12) at a right angle, directed toward the outside of the arm (1).

10. Suspension arm according to Claim 9, characterized in that indexing bores are borne by the dropped edge (12).

11. Suspension arm according to Claim 9, characterized in that means of determining (14) the stable position of the vehicle are borne by the dropped edge (12).

12. Suspension arm according to one of Claims 4 to 11, characterized in that a groove (7) is formed along the center part (6) of the single part of the arm (1).

13. Suspension arm according to one of the foregoing claims, characterized in that a flange (41) is made in the uninterrupted connection of the bore corresponding to the front coupling (4) of the hinge, that flange (41) being oriented toward the rear coupling (5) of the hinge.

14. Method of obtaining a motor vehicle suspension arm according to any one of Claims 1 to 13, involving the stamping of a single sheet metal part (2) having three couplings (3, 4 and 5) with the chassis and a wheel support, characterized in that it consists at least of the following stages:

the formation of a triangular flat surface (6) presenting at two ends a bore of vertical axis,

the creation of a raised edge (11) and of a dropped edge (12) borne at a right angle by that raised edge (11) on the side (10) situated between the front coupling (4) of the hinge and the wheel support coupling (3),

the creation of a vertical wall (9) on the side (8) situated between the rear coupling (5) of the hinge and the wheel support coupling (3),

the formation of smooth shapes and joining planes (43, 44) complementing the adjacent sides (10, 16) in order to generate the front coupling (4) of the hinge of appreciably horizontal axis,

the creation of a flange (41) in the extension of the bore corresponding to the front coupling (4) of the hinge, in the direction of the rear coupling (5) of that hinge,

the marking and indexing of the dropped edge (12).

15. Method of mounting a suspension arm according to the foregoing claim, involving a placement of elastic elements forming the coupling (3, 4 and 5) of the arm (1) on the chassis and a wheel support, characterized in that the elastic element forming the front coupling (4) of the hinge created between the arm (1) and the chassis is mounted in a direction opposite the flange (41).